

In the Claims

Applicant has submitted a new claim set showing amended claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claims 2, 10 and 21 without prejudice or disclaimer.

Please amend pending claims 1, 9, 17, 19 and 28 as noted below.

1. (Currently amended) Apparatus comprising:
a first sensor of an array of sensors to detect radiation and to output a first image signal based on the radiation detected by the first sensor; and
offset correction circuitry to compensate errors in at least the first image signal and to output at least a corrected first image signal,
wherein the offset correction circuitry includes means for providing at least one time-varying compensation signal that is added to the first image signal to generate the corrected first image signal; and
wherein the means for providing at least one time-varying compensation signal includes means for providing a different time-varying compensation signal for at least two sensors of the array of sensors.

2. (Cancelled)

3. (Previously presented) The apparatus of claim 1, wherein:
the means for providing at least one time-varying compensation signal includes a capacitor; and
the at least one time-varying compensation signal is based on a charging and a discharging of the capacitor.

4. (Previously presented) The apparatus of claim 1, wherein the means for providing at least one time-varying compensation signal includes a compensating source to compensate changes in at least the first image signal due to current-induced heating of at least the first sensor.

5. (Previously presented) The apparatus of claim 1, wherein the means for providing at least one time-varying compensation signal includes means for providing a variable current.

6. (Previously presented) The apparatus of claim 5, wherein the means for providing the variable current includes means for adding the variable current to the first image signal such that an average value of the variable current and the first image signal remains essentially constant during a signal sampling period.

7. (Previously presented) The apparatus of claim 1, wherein the means for providing at least one time-varying compensation signal includes means for providing a variable voltage.

8. (Previously presented) The apparatus of claim 7, wherein the means for providing the variable voltage includes means for adding the variable voltage to the first image signal such that an average value of the variable voltage and the first image signal remains essentially constant during a signal sampling period.

9. (Currently amended) A method for compensating errors in a first image signal generated by a first sensor of an array of sensors in response to radiation detected by the first sensor, comprising a step of:

a) adding a time-varying compensation signal to the first image signal; and wherein the act a) includes an act of:
adding a different time-varying compensation signal to at least two respective image signals of at least two sensors of the array of sensors.

10. (Cancelled)

11. (Original) The method of claim 9, wherein the time-varying compensation signal is a variable current.

12. (Original) The method of claim 9, wherein the time-varying compensation signal is a variable voltage.

13. (Previously presented) The method of claim 9, wherein the step of adding includes a step of generating the time-varying compensation signal by charging and discharging a capacitor in a predetermined manner based on the first image signal.

14. (Previously presented) The method of claim 9, wherein the step of adding includes a step of generating the time-varying compensation signal such that an average value of the time-varying compensation signal and the first image signal remains essentially constant during a signal sampling period.

15. (Original) The method of claim 14, wherein the time-varying compensation signal is a variable current.

16. (Original) The method of claim 14, wherein the time-varying compensation signal is a variable voltage.

17. (Currently amended) The method of claim 9, wherein a plurality of sensors including the first sensor generate respective image signals including the first signal in response to radiation detected by each sensor of the ~~plurality~~ array of sensors, and wherein the act a) includes an act of:

generating the time-varying compensation signal based on non-uniformities of the sensors.

18. (Previously presented) The method of claim 9, wherein the step of adding includes a step of generating the time-varying compensation signal based on changes in the first image signal due to current-induced heating of at least the first sensor.

19. (Currently amended) An apparatus, comprising:
~~at least a first sensor of an array of sensors~~ adapted to generate a first image signal in response to radiation detected by the first sensor; and
at least one signal generator configured to add a first time-varying compensation signal to the first image signal so as to provide an adjusted first image signal; and
wherein the at least one signal generator is configured to add a different time-varying compensation signal to at least two respective image signals of at least two sensors of the array of sensors so as to provide at least two adjusted image signals.

20. (Previously presented) The apparatus of claim 19, wherein the first sensor is a microbolometer.

21. (Cancelled)

22. (Previously presented) The apparatus of claim 19, wherein the at least one signal generator is configured to generate the first time-varying compensation signal as a variable current.

23. (Previously presented) The apparatus of claim 19, wherein the at least one signal generator is configured to generate the first time-varying compensation signal as a variable voltage.

24. (Previously presented) The apparatus of claim 19, wherein the at least one signal generator includes at least one capacitor, the at least one signal generator being configured to

generate the first time-varying compensation signal by charging and discharging the at least one capacitor in a predetermined manner based on the first image signal.

25. (Previously presented) The apparatus of claim 19, wherein the at least one signal generator is configured to provide the adjusted first image signal such that an average value of the adjusted first image signal remains essentially constant during a sampling period.

26. (Previously presented) The apparatus of claim 25, wherein the at least one signal generator is configured to generate the first time-varying compensation signal as a variable current.

27. (Previously presented) The apparatus of claim 25, wherein the at least one signal generator is configured to generate the first time-varying compensation signal as a variable voltage.

28. (Currently amended) The apparatus of claim 19, ~~further comprising a plurality of sensors including the first sensor, the plurality of sensors adapted to generate respective image signals including the first signal in response to radiation detected by each sensor of the plurality of sensors,~~

wherein the at least one signal generator is configured to generate at least the first time-varying compensation signal based on non-uniformities of the sensors.

29. (Previously presented) The apparatus of claim 19, wherein the at least one signal generator is configured to generate the first time-varying compensation signal based on changes in the first image signal due to current-induced heating of at least the first sensor.